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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/173,858	10/16/1998	BART ALAN MELTZER	19957.701	4734

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EXAMINER

HUYNH, CONG LAC T

ART UNIT PAPER NUMBER

2178

DATE MAILED: 07/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/173,858

Applicant(s)

MELTZER ET AL. 

Examiner

Cong-Lac Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 61-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 61-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 24. 6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: RCE filed on 2/13/03 and the preliminary amendment filed 5/2/03 to the application filed on 10/16/98.
2. Claims 1-16, 61-72 are pending in the case. Claims 1 and 61 are independent claims.
3. The rejections of claims 1-16 under 35 U.S.C. 101, as being directed to non-statutory subject matter have been withdrawn in view of the amendment.
4. The rejections of claims 1-16, 61-72 under 35 U.S.C. 112, second paragraph, as being indefinite have been withdrawn in view of Applicants' arguments.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-16, 61-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call (US Pat No. 6,418,441, 7/9/02, filed 7/24/00, priority 3/27/98) in view of W3C, *Extensible Markup Language (XML) 1.0*, 2/10/98, pages 1-37 (from the IDSs).

Regarding independent claim 1, Call discloses:

- a machine-readable specification of an interface to transaction processes stored in memory accessible by at least one node in the network, including interpretation information providing a definition of an input document, and a definition of an output document (col 23, line 15 to col 24, line 65, col 27, line 25 to col 28, line 8, col 28, line 42 to col 29, line 30, col 32, line 6 to col 33, line 16: a sale transaction process at a point of sale register, from allowing a customer to search on-line for a desired product to the credit card transaction to enable the customer to complete the purchases where the product page for selecting an desired item is considered as an input document, and the order sent out including the specification of product sold, quantity of each sold, as well as addresses for billing and shipping, which are produced from a portion data of the input document, are considered as output documents of the transaction at the point of sale; since the transaction documents are in XML format, these documents are machine-readable documents and should be stored in memory of

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a server accessible by at least one node in the network, which is a point of sale;
the fact that the transaction documents are in XML format suggests including the definitions in the documents according to the XML structures)

Call does not explicitly disclose that the definitions of the input document and the output document comprising respective descriptions of sets of storage units and logical structures for the sets of storage units.

W3C discloses that each XML document comprises respective descriptions of set of storage units and logical structures for the set of storage units (page 3, Introduction: "XML documents are made up of *storage units* called entities, which contain either *parsed or unparsed data*. Parsed data is made up of characters, some of which form character data, and some of which form *markup*. *Markup encodes a description of the document's storage layout and logical structure*. XML provides a mechanism to impose constraints on the storage layout and logical structure.")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Call into W3C for the following reason. Call suggests an transaction documents at a point of sale using XML format for a purchase transaction at a node in the internet where a user can search and buy an item on-line and W3C discloses the structures of an XML document which comprises storage units and the logical structures for the set of storage units. This motivates to combine W3C into Call for supporting the XML characteristics for the transaction documents.

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Regarding claim 2, which is dependent on claim 1, Call does not disclose that the interpretation information includes data type specification for at least one logical structure in the definitions of the input and output document.

W3C discloses that each XML document contains one or more elements which are delimited by starts-tags and end-tags, and each element has a *type* identified by name called generic identifier and may have a set of *attribute specification* (page 13, Logical structure).

As mentioned in claim 1, since the documents used in the purchase transaction in Simpson are in XML format, these documents inherit the features of a general XML document as disclosed in W3C. This is applied for all the claims relating to the transaction document structures and W3C is used for rejecting.

Regarding claim 3, which is dependent on claim 1, W3C discloses that the interpretation information includes at least one data structure mapping predefined sets of storage units for a particular logical structure in the definition of the input and output documents, to respective entries in a list (pages 14-17).

Regarding claims 4 and 5, which are dependent on claim 1, Simpson and W3C do not disclose explicitly that a repository in memory accessible by at least one node in the network storing a library of logical structures, interpretation information for logical structures, and the identifier of a transaction. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified

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Simpson and W3C to include a repository in memory for storing logical structures and the identifier of a transaction interface since it was well known in the art that any defined data for a program in a network should have a name for identifying and should be stored in a memory of a server for using later on such as retrieving data, identifying data, or manipulating data.

Regarding claim 6, which is dependent on claim 1, W3C discloses that the machine readable specification includes a document compliant with a definition of an interface document including logical structures for storing an identifier of the interface, and for storing at least one of specifications and references to specifications of a set of one or more transactions supported by the interface (page 13).

Regarding claim 7, which is dependent on claim 6, Simpson discloses the identifier of a transaction (col 1, lines 59-64).

W3C discloses an identifier for an element in an XML document (page 13).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Simpson to include a reference to a specification of a particular transaction which has logical structures for storing at least one of definitions and references to definitions of input and output documents for the particular transaction since a reference is considered as a name or an identifier and the transaction documents includes input and output documents with logical structures and definitions of XML structures.

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Regarding claim 8, which is dependent on claim 1, W3C discloses that the storage units comprise parsed data (page 3, Introduction: "XML documents are made up storage units called entities, which contain either parsed or unparsed data...").

Regarding claim 9, which is dependent on claim 1, Simpson does not explicitly disclose the parsed data in at least one of the input and output documents comprises:

- character data encoding text characters in the one of the input and output document
- markup data identifying sets of storage units according to the logical structure of the one of the input and output documents

Instead Simpson discloses the shopping transaction via XML product information for selecting as an input document, and order, billing and shipping information produced from a data portion of the input document as an output document (col 28, line 42 to col 29, line 46).

W3C discloses that the parsed data comprises:

- character data encoding text characters in XML documents (page 3, Introduction: "*XML documents* are made up storage units ...*Parsed data* is made up characters, some of which form *character data* ..."; page 6, Characters: "A parsed entity contains text, a sequence of characters, which may represent markup or character data
- markup data identifying sets of storage units according to the logical structure of XML documents (page 3, Introduction: "*XML documents* are made up storage

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units ... *Parsed data* is made up characters, some of which form character data, and some of which form *markup*. *Markup encodes a description of the document's storage layout and logical structure ...*")

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined W3C into Simpson since the XML documents in Simpson which function as input and output documents should comprise parsed data with claimed features since these features are characteristics of an XML document.

Regarding claim 10, which is dependent on claim 9, W3C discloses that at least one of the sets of storage units encodes a plurality of text characters providing a natural language word (page 6, Document, page 7, Characters and page 8, Character Data and Markup: since the storage units encodes by character data and markup which are text, the storage units provide a natural language word).

Regarding claim 11, which is dependent on claim 8, W3C discloses that the interpretation information for at least one of the sets of storage units identified by a particular logical structure of at least one of the input and output documents, encodes respective definitions for sets of parsed characters (page 9: "the function of the markup in an XML document is to describe its storage and logical structure and to associate attribute-value pairs with its logical structures. XML provides a mechanism, the document type declaration, to *define constraints on the logical structure* and to support the use of predefined storage units ... the XML document type declaration contains or

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points to markup declarations that provide a grammar for a class of documents. This grammar is known as a *document type definition, or DTD ...*").

Regarding claim 12, which is dependent on claim 8, W3C discloses that the storage units comprise unparsed data (page 3, Introduction: "XML documents are made up storage units called entities, which contain either parsed or unparsed data..."; page 20, Physical Structures).

Regarding claim 13, which is dependent on claim 1, as mentioned in claims 4 and 5 above, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Simpson and W3C to include a repository in memory for storing all data related to the purchase transactions since it was well known in the art that any defined data for a program in a network should be stored in a memory of a server for using later on such as retrieving data, identifying data, or manipulating data.

Regarding claim 14, which is dependent on claim 13, W3C discloses that the repository of document types includes a document type for identifying participant process in the network (page 9: "XML provides a mechanism, the document type declaration, to define constraints on the logical structure and to support the use of predefined storage units").

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Regarding claim 15, which is dependent on claim 1, W3C discloses that the definitions of the input and output documents comprise document type definitions compliant with a standard Extensible Markup Language XML (page 9: "XML provides a mechanism, the document type declaration, to define constraints on the logical structure and to support the use of predefined storage units ... the XML document type declaration contains or points to markup declarations that provide a grammar for a class of documents. This grammar is known as a document type definition, DTD ... the DTD fro a document consists of both subsets taken together").

Regarding claim 16, which is dependent on claim 1, W3C discloses that the machine readable data structure including interpretation information comprises a document organized according to a document type definition compliant with a standard Extensible Markup Language XML (page 9: an XML document is a machine readable data structure organized according to a DTD compliant with the standard Extensible Markup Language).

Regarding independent claim 61, Simpson does not disclose explicitly:

- defining a machine readable definition of an input document for a node in the network including resources to execute a process in the transaction, and a machine readable definition of an output document for the node, the definitions the input and output documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units

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- providing interpretation information for the logical structures to the node

Instead Simpson discloses the shopping transaction at a point of sale using XML documents for providing the product information, the order, the payment, and the shipping which are considered as the input and output documents (col 22, line 46 to col 24, line 11; col 24, lines 30-65; col 28, line 42 to col 29, line 46).

W3C discloses:

- defining a machine readable definitions of documents comprising respective descriptions of sets of storage units and logical structures for the sets of storage units (page 3, Introduction and page 9: XML documents are made up of storage units which contain either parsed or unparsed data where parsed data is made up characters some of which form character data, and some of which form markup to encode a *description of the document storage layout and logical structures*).
- providing interpretation information for the logical structures (page 9: the function of the markup in an XML document is to associate *attribute-value* pairs with its logical structures)

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined W3C into Simpson since W3C discloses the structures of an XML document and Simpson applies the XML features in processing the XML documents in the shopping transactions where it was obvious that XML documents in the shopping transaction should include XML structures.

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Claims 62-71 are for a method of claims 2-5, 8-12, 15, and are rejected under the same rationale.

Regarding claim 72, which is dependent on claim 61, Simpson and W3C do not disclose:

- providing a parser to generate event signals in response to logical structures in the definition of the input document
- providing event listener program which respond to the event signals to execute the process

Instead Simpson discloses the shopping transaction from providing the product information document for a user to search for a desired product until the on-line payment and the product delivery (col 23, line 15 to col 24, line 65, col 27, line 25 to col 28, line 8, col 28, line 42 to col 29, line 30, col 32, line 6 to col 33, line 16).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Simpson to include "providing a parser to generate event signals in response to logical structures..." and "providing event listener program which respond to the event signals to execute the process" for the following reason. The fact that Simpson executes the transaction program by running the XML product documents which include logical structures suggests said parser and said event listener program as claimed.

Response to Arguments

8. Applicant's arguments with respect to claims 1-16, 61-72 have been considered but are moot in view of the new ground(s) of rejection.

Applicants argue that claims 1-16, as amended, will overcome the 101 rejections.

Examiner agrees. The 101 rejections on claims 1-16 have been withdrawn from this office action.

Applicants also argue that claims 1-16, 61-72, as explained, will overcome the 112 rejections.

Examiner agrees. The 112 rejections on claims 1-16, 61-72 have been withdrawn from this office action.

However, the pending claims 1-16, 61-72 are rejected under the 103 rejections as being unpatentable over Simpson and W3C as in the rejections above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Davidson et al. (US Pat No. 6,083,276, 7/4/00, filed 6/11/98).

Meltzer et al. (US Pat No. 6,125,391, 9/26/00, filed 10/16/98).

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Wichert et al., Non-Repudiation Evidence Generation for CORBA Using XML, IEEE 1999, pages 320-327.

Dickinson, Keeping an Electronic Commerce Shop, StandardView, vol. 6, no. 3 September 1998, pages 106-109.

Usdin et al., XML : Not a Silver Bullet, but a Great Pipe Wrench, StandardView, vol. 6, no. 3, September 1998, pages 125-132.

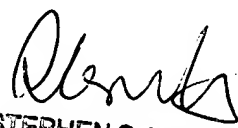
Suzuki et al., Managing the Software Design Documents with XML, ACM 1998, pages 127-136.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 703-305-0432. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9731 for regular communications and 707-305-9731 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9000.

clh
6/23/03


STEPHEN S. HONO
PRIMARY EX